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12/15/03  
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
**VIKTORS BERTIS**

Serial No.: 09/466,438

Filed: 17 DECEMBER 1999

For: **METHOD AND SYSTEM FOR  
TRIGGERING ENHANCED  
SECURITY VERIFICATION IN  
RESPONSE TO ATYPICAL  
SELECTIONS AT A SERVICE-  
ORIENTED USER INTERFACE  
TERMINAL**

§ Attorney Docket No. AT9-99-725  
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§ Examiner: JAMES A. KRAMER  
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§ Art Unit: 3627  
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**REPLACEMENT APPEAL BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant reinstates the previously-filed Notice of Appeal (mailed on August 25, 2003) and submits this Replacement Appeal Brief in triplicate in response to the Examiner's Supplemental Final Office Action, mailed on November 28, 2003, in the above-referenced application.

**CERTIFICATE OF MAILING  
UNDER 37 CFR § 1.8(a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to MAIL STOP APPEAL BRIEF - PATENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 12, 2003.

Betty J. Kirk  
Type Name of Person Signing

  
Signature of Person Signing

## **REAL PARTY IN INTEREST**

The Real Party in Interest in the present Appeal is International Business Machines Corporation, the assignee, as evidenced by the assignment set forth at Reel 010477, Frame 0042.

## **RELATED APPEALS AND INTERFERENCES**

No related appeals or interferences are known to Appellant, Appellant's legal representative, or assignee, which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the present Appeal.

## **STATUS OF THE CLAIMS**

Claims 1-6, 8-10, 13-23, and 25 stand finally rejected by the Examiner as noted in the Supplemental Final Office Action dated November 28, 2003, and remain on appeal.

## **STATUS OF THE AMENDMENTS**

No amendment was submitted subsequent to the Supplemental Final Office Action.

## **SUMMARY OF THE INVENTION**

As shown in Figures 1-4, Applicant's invention comprises a method, system, and computer program product for prompting a repeat user of a payment card at an interface terminal with additional security-related questions when the user selects responses that deviate from his or her typical selections. Page 9, lines 3-7. The payment card is read at the terminal, its line of credit is authorized, and a profile of the user's purchasing habits is retrieved. Page 9, lines 17-32. The user then enters his or her current selection of options. Page 10, lines 17-19. A determination is then made as to whether the user's current selections match his or her user profile. Page 10, lines 19-22. If the user's current selections match the user profile, the process allows the user to obtain the services or facilities. Page 10, lines 24-26. If the user's current selections do not match the user profile, the process queries the user with additional security questions to ascertain whether the current user is an authorized user. Page 10, lines 28-34. If the user is unable to answer the security questions correctly, the process prevents the user from accessing the services or facilities. Page 11, lines 10-15. If the user is able to answer the

security questions correctly, the process allows the current user to begin fueling his or her vehicle, for example. Page 11, lines 15-19.

## ISSUE

Is the Examiner's rejection of the claims under 35 U.S.C. § 103(a) as being unpatentable over the cited references well founded?

## GROUPING OF THE CLAIMS

For purposes of this appeal, all of the claims stand or fall together as one group.

## ARGUMENTS

The Examiner finally rejected all of the claims under 35 U.S.C. § 103(a). The Examiner stated that claims 1-4, 6, 8-9, 13-21, 23, and 25 are unpatentable over *Findley* in view of *Kanevsky*, and that claims 5, 10, and 22 are unpatentable over *Findley* in view of *Kanevsky* and in further view of *Penzias*. Supplemental Final Office Action, pages 2-5.

(column 5  
53-57) The primary cited reference, *Findley*, discloses an efficient method of detecting attempted unauthorized use of credit cards via remote purchase by telephone. Although on the surface this reference appears to be similar to Applicant's invention, there are several fundamental differences. *Findley* is designed to "limit its exposure to repetitive theft from the same merchandise category." Column 4, lines 59-61. In direct contrast, Applicant's invention is designed to encourage and protect repetitive purchases of the same merchandise. Put another way, *Findley's* system and method triggers a security hold on an account if the behavior of the user becomes too consistent, where as Applicant's system and method reacts to behavior that deviates from a consistent pattern.

Perhaps the easiest explanation for this first fundamental difference is that *Findley* is designed to monitor activity made from any telephone in the world for purchases selected from a massive array of products and/or services. Because of the potentially random use of telephones and the enormous variety of purchases, *Findley* is understandably highly focused on the telephone calling patterns and credit card usage habits of authorized users. In contrast,

Applicant's invention is designed to work with direct, user-interface terminals (e.g., gas stations) where the user is actually standing at the provider's terminal and is purchasing from a relatively limited supply of goods and/or services for receipt thereof at the terminal. Because the purchasing habits of users who frequent direct user-interface terminals tend to be extremely consistent, Applicant's invention does not address calling patterns (i.e., how or where the terminal is engaged) or credit card usage habits (e.g., dollar amounts, time since last purchase, etc.). Rather, Applicant focuses on analyzing the consistency of the current selection of goods and/or services at the terminal.

Findley  
1) Bookstore  
has the  
one  
every

It is practically inconceivable that *Findley* would be applied at a direct user-interface terminal. By way of illustration, consider one of the example transactions described in *Findley* itself, compared to a transaction by a user of Applicant's invention at an automobile refueling station. A credit card customer that is using a telephone will tend to purchase different goods or services *every time* they pick up the phone. Occasionally, a repeat customer may desire to purchase one or two of the same goods or services, or perhaps multiple items for friends or family members. However, it is improbable that a repeat customer of, for example, a bookstore, a clothing purveyor, or an electronics store, will purchase the same set of books, clothes, or electronics with every return visit. It is exactly this type of behavior that *Findley* is designed to detect and prevent. Thus, it is antithetical to suggest that *Findley* be applied to an application wherein highly consistent purchasing behavior is the norm.

However, a user of Applicant's invention at an automobile refueling station will tend to make the same purchase decisions for goods and/or services every time. For example, the user may always purchase premium unleaded fuel, and always purchase an economy car wash. Rather than trigger a security alert as would be the case with *Findley*, Applicant's invention automatically allows such consistent behavior by the user to proceed unimpeded in order to expedite the transaction. In other words, *Findley* is great for conventional telephone credit card shopping where goods or services number in the millions, and access is virtually unlimited, but it is inappropriate for direct, at-the-terminal, self-service transaction applications such as the one described above.

Another fundamental difference between *Findley* and Applicant's invention is that *Findley* does not analyze the actual goods and/or services being selected by the user. At best, *Findley* observes the "merchandise category" (column 4, lines 60-61) in which the goods may be classified. However, the point-of-sale terminals for which Applicant's invention is designed will inherently all fall within the same category (e.g., gas station services). Moreover, *Findley* teaches one skilled in the art to guard against "repetitive theft from the same merchandise category," which is the opposite of Applicant's invention.

The other factors ("history factors") used by *Findley* to analyze purchasing behavior are also clearly defined. Column 3, line 50, through column 5, line 30. The most important factor, the origin history factor (OHF), analyzes all of the telephone numbers, via Caller ID, from which previous purchases were made. Column 2, lines 40-42. Applicant's invention is not concerned with this factor since all purchases made under Applicant's invention originate at the provider's very own point-of-sale terminal. Another factor use by *Findley* is the dollar purchase amount (D). Column 4, line 8. Applicant is not concerned with the dollar amount purchased by users within its system since, again, a typical user will rarely vary his grade of fuel, amount of fuel, and quality level of car wash purchased. *Findley* is also concerned with time between purchases (P) and the number of different credit cards used (column 4, lines 22-25), while Applicant does not address these issues. Thus, *Findley* analyzes an entirely different set of criteria for detecting fraud than Applicant.

Each of the independent claims highlights at least one fundamental difference between Applicant's invention and *Findley*, namely, the ability to analyze the selection of actual goods and/or services by the user. For example, each of the independent claims specifically focuses on the "selection of goods and/or services," and "options for goods and/or services." There is no teaching or suggestion in *Findley* that is directed to the specific goods or services either previously selected by the authorized user, or currently selected by the present user. At the very most, *Findley* can be said to examine a "merchandise category," but even that level of scrutiny is limited to guarding against repetitive theft, which is completely antithetical to Applicant's invention as discussed at length above.

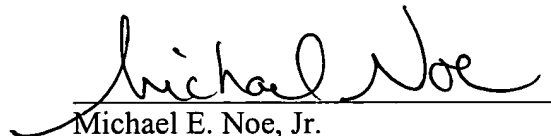
In addition to this requirement, claims 6 and 23 also state that the user is not required to answer the security-related question, "if the user's current selections match the prestored selections or are within a desired range of consistency with the prestored selections." *Findley* makes no provision for analyzing a range of goods and/or services selected during a current purchase with those made during previous purchases.

Claims 9 and 19 go even further than claim 1 by generating user profiles of the goods and/or services in response to the previous selections made by the user. A current user is then analyzed with respect to his or her current selection of goods and/or services by comparing the items selected. In addition, if the goods and/or services selected by the current user do not match the user profile of goods and/or services, or are not within a desired range of consistency with the prestored selections of goods and/or services, then the current user must correctly answer a security-related question.

The other cited references, *Kanevsky* and *Pentias*, merely stand for the propositions of questioning a user to provide access control, and protecting multiple account numbers, respectively. However, since the primary cited reference has been effectively disqualified, the arguments for these references are moot.

It is respectfully urged that the claims are in condition for allowance and favorable action is requested. In that the fee of **\$320.00** was previously paid for the Appeal Brief submitted on August 28, 2003, no fee is believed to be due. However, if it is deemed any additional fees are required, please charge **IBM Corporation Deposit Account No. 09-0447**.

Respectfully submitted,

A handwritten signature in black ink, reading "Michael Noe", with a horizontal line drawn underneath it.

Michael E. Noe, Jr.

Reg. No. 44,975

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## **APPENDIX**

1. A method for automatically authorizing a remote point of purchase action at a facility which permits such actions, said method comprising the steps of:

storing selections of goods and/or services made by an authorized user during a previous transaction;

prompting a user with options for selecting goods and/or services during a current transaction at the facility;

comparing the options for goods and/or services selected by the user with the user's prestored selections of goods and/or services;

requiring the user to answer a security-related question if the options for goods and/or services selected by the user are inconsistent with the user's prestored selections of goods and/or services; and

thereafter permitting the current transaction only if the user correctly answers said security-related question.

2. The method of claim 1 wherein the step of storing selections comprises generating a user profile of selections of goods and/or services made by the user during the last  $n$  transactions.

3. The method of claim 1 wherein the step of storing selections comprises storing selections of goods and/or services made by the user at a plurality of facilities.

4. The method of claim 1 wherein the step of storing selections comprises storing selections of goods and/or services made by the user while using a credit or debit card.

5. The method of claim 1 wherein the step of storing selections comprises storing selections of goods and/or services made by the user while using a plurality of credit or debit cards, wherein each of the credit or debit cards has a different account number.

6. The method of claim 1 wherein the step of requiring the user to answer a security-related question is not required if the user's current selections match the prestored selections or are within a desired range of consistency with the prestored selections.

8. The method of claim 1 wherein the step of requiring the user to answer a security-related question entails requiring the user to answer a plurality of security-related questions, and wherein the step of permitting the current transaction requires the user to answer each of the security-related questions correctly.

9. A method for automatically authorizing a remote point of purchase action with a credit or debit card at facilities which permit such actions, said method comprising the steps of:

storing selections of goods and/or services made by an authorized user during the previous  $n$  transactions with the credit or debit card at the facilities and generating a user profile of goods and/or services in response thereto;

prompting a current user with options for goods and/or services during a current transaction with the credit or debit card at one of the facilities;

comparing the options for goods and/or services selected by the current user with the user profile of goods and/or services;

requiring the current user to answer a security-related question if the options for goods and/or services selected by the current user do not match the user profile of goods and/or services, or are not within a desired range of consistency with the prestored selections of goods and/or services; and then

permitting the current transaction only if the current user correctly answers said security-related question.

10. The method of claim 9 wherein the step of storing selections comprises storing selections of goods and/or services made by the authorized user while using a plurality of credit or debit cards at various ones of the facilities, wherein each of the credit or debit cards has a different account number.



13. The method of claim 9 wherein the step of requiring the current user to answer a security-related question entails requiring the current user to answer a plurality of security-related questions, and wherein the step of permitting the current transaction requires the current user to answer each of the security-related questions correctly.

14. A system for automatically authorizing a remote point of purchase action at a facility which permits such actions, comprising:

- a memory for storing previous selections of goods and/or services made by an authorized user;

- a user terminal adapted to prompt a user with options for goods and/or services during a transaction at the facility;

- processor means for comparing options for goods and/or services selected by the user at the user terminal during a current transaction with the previous selections of goods and/or services stored in the memory;

- control means for requiring the user to answer a security-related question when the options for goods and/or services selected by the user at the user terminal during the current transaction do not match the previous selections of goods and/or services stored in the memory, or are not within a desired range of consistency with the previous selections of goods and/or services, and for thereafter permitting the current transaction only when the user correctly answers said security-related question.

15. The system of claim 14 wherein the memory generates a user profile of selections of goods and/or services made by the user during the last  $n$  transactions.

16. The system of claim 14 wherein the user terminal is a device for reading a credit or debit card.

17. The system of claim 14 wherein the control means requires the user to correctly answer a plurality of security-related questions.

18. A computer program product, residing on a computer usable medium and having computer usable program means embodied therein, said computer usable program means comprising:

means for storing selections of goods and/or services made by an authorized user during a previous transaction;

means for prompting a user with options for goods and/or services during a current transaction at the facility;

means for comparing options for goods and/or services selected by the user with the prestored selections of goods and/or services;

means for requiring the user to answer a security-related question if the options for goods and/or services selected by the user do not match the prestored selections of goods and/or services, or are not within a desired range of consistency with the prestored selections of goods and/or services; and

means for permitting the current transaction only if the user correctly answers said security-related question.

19. The computer program product of claim 18 wherein the means for storing selections generates a user profile of selections of goods and/or services made by the user during the last *n* transactions.

20. The computer program product of claim 18 wherein the means for storing selections stores selections of goods and/or services made by the user at a plurality of facilities.

21. The computer program product of claim 18 wherein the means for storing selections stores selections of goods and/or services made by the user while using a credit or debit card.

22. The computer program product of claim 18 wherein the means for storing selections stores selections of goods and/or services made by the user while using a plurality of credit or debit cards, wherein each of the credit or debit cards has a different account number.

23. The computer program product of claim 18 wherein the means for requiring the user to answer a security-related question is predicated on the user's current selections of goods and/or services being substantially inconsistent with the prestored selections of goods and/or services.

25. The computer program product of claim 18 wherein the means for requiring the user to answer a security-related question entails requiring the user to answer a plurality of security-related questions, and wherein the means for permitting the current transaction requires the user to answer each of the security-related questions correctly.